

Remarks/Arguments

Summary of the Office Action

The amendment filed on 09/22/2003 was objected to for purportedly adding new matter to the disclosure.

Claims 1-6 and 13-20, which are computerized method claims, were rejected under 35 U.S.C. §101 for purportedly being directed to non-statutory subject matter.

Claims 1-12 were rejected under 35 U.S.C. §112, first paragraph, for purportedly containing subject matter that was not described in the specification in a way that would enable one skilled in the art ... to make and/or use the invention since they allegedly include new matter that was added by the amendment filed on 09/22/2003.

Claims 1-20 were rejected under 35 U.S.C. §112, first paragraph as containing subject matter that was not described in the specification in a way that would enable one skilled in the art ... to make and/or use the invention. In particular, Claims 13 and 20 were rejected under 35 U.S.C. §112, first paragraph, for not defining the terms S_i and the function $\text{sum}(W_i)$, which terms do not appear in any claim.

Claims 1-20 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Claims 1, 7, and 8 were rejected under 35 U.S.C. §112, second paragraph, because the Examiner asserts that “first total term weight” and “second total term weight” can not be understood, that the linkage between the “first total term weight” and the “second total term weight” is not understood, and how the first and second total term weights would be computed is not understood.

Claims 1-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wical (U.S. Patent No. 6,460,034), which is the same reference upon which the §103(a) rejections in the first Office Action were based.

Non-Art Objections and Rejections

In paragraph 2 of the office action the Examiner notes that claims 1-20 are presented for examination. Based on the arguments and amendments presented herein, Applicant respectfully requests that these claims be allowed.

In paragraph 3 of the office action the Examiner asserts that the amendment filed on 09/22/2003 introduces new matter into the disclosure. In particular, the Examiner asserts that paragraphs [0006], [0007], [0026], and [0039], which were amended in response to the first office action introduce new matter.

The relevant portions of [0006], [0007], and [0026] that were amended changed:

“a total term weight of M” to

“a first total term weight”

and changed:

“a total term weight less than M” to

“a second total term weight that is less than the first total term weight”.

Thus, an electronic quantity that is disclosed and supported in the original application and that was previously referred to as “a total term weight of M” is now being referred to as “a first total term weight”. Applying a different name to an electronic quantity whose function has not changed does not add new matter to an application. Similarly, an electronic quantity that is disclosed and supported in the original application and that was previously referred to as “a total term weight less than M” is now being referred to as “a second total term weight”. Again, applying a different name to an electronic quantity whose function has not changed does not add new matter to an application. MPEP §706.03(o) teaches that new matter includes not only the addition of wholly unsupported subject matter, but may also include adding specific percentages or components after a broader original disclosure. Basically renaming an electronic quantity to make a claim read more clearly is not new matter as discussed in MPEP §706.03(o). No new functionality, feature, or subject matter has been added.

The relevant portion of [0039] that was amended added the sentence:

In equation(1) above, let S_i represent the score produced by an individual term or branch of a query, let W_i represent the weight assigned to an individual term or branch and let $\text{sum}(W_i)$ represent the mathematical sum of the weights W_i assigned to individual terms.

The original specification teaches and supports these descriptions of S_i , W_i , and $\text{Sum}(W_i)$ by, for example, equations 1-4 and the accompanying explanations and examples. Thus, since these amendments do not add new matter, Applicant respectfully requests that the Examiner withdraw these objections.

35 U.S.C. § 101

In paragraph 4 of the office action the Examiner rejects claims 1-6 and 13-20 under 35 U.S.C. § 101. Specifically, the Examiner rejects claims 1-6 and 13-20 for being directed to non-statutory subject matter. The Examiner asserts that the claimed methods do not apply, involve, use or advance the technological arts. Applicant directs the Examiner to the Examination Guidelines for Computer-Related Inventions, Final Version, §II A which reads:

The utility of an invention must be within the “technological” arts. A computer-related invention is within the technological arts. A practical application of a computer-related invention is statutory subject matter.

The invention is clearly a computer-related invention. The Field of the Invention states that “the invention relates to the information retrieval and relevance ranking arts.” The claims refer to retrieving “documents”. The term “document” is defined in the original application to mean “an object being searched for” like an electronic document, web page, network address, link, database address, and so on. Additionally, Figure 1 clearly illustrates a computer based system that facilitates retrieving a document. Thus, the invention concerns computerized systems and methods for selectively moving physical electronic quantities from place to place. Therefore, even if the “pencil and paper” rejection were a valid grounds for a §101 rejection, which it is not, it is clearly impossible to retrieve a document from a database using a pencil and paper. Patent examiners have been lectured for over thirty years on the impropriety of such rejections. For example, in *In re McIlroy*, 442 F. 2d 1397 (1971), the court held that computer

software as a process is a technologic/useful art. Similarly, in *In re Musgrave*, 413 F. 2d 882 (1970) the court held that machine implementation versus mental implementation is not a determinative dichotomy in deciding whether a method is statutory under 35 U.S.C. §101. Likewise, in *In re Benson*, 441 F. 2d 682 (1971) the court held that a process having no practical value other than enhancing the internal operation of a digital computer is in the technological arts and is statutory under §101.

Thus, claim 1, which recites, "A method of optimizing a response time for retrieving relevant documents..." is a computer-related invention that the Examination Guidelines identify as statutory subject matter. Additionally, the computerized method produces a concrete, tangible, real-world result. Furthermore, response time is optimized over other computerized prior art solutions and fewer candidate documents are actually retrieved. Claim 13 similarly concerns a computerized method and is, therefore, similarly allowable. Therefore, Applicant respectfully requests that the Examiner withdraw these §101 rejections.

35 U.S.C. § 112, First Paragraph

In paragraph 5 of the office action the Examiner rejects claims 1-12 under 35 U.S.C. § 112, first paragraph as containing subject matter that was not described in the specification at the time the application was filed since the claims purportedly include new matter that was added by the amendment filed on 09/22/2003.

Concerning claims 1, 7, and 8, the Examiner asserts that "first total term weight" and "second total term weight" are new matter. Claims 1, 7, and 8 were amended in the amendment filed 09/22/2003. Portions of claims 1, 7, and 8 were changed from:

"a total term weight of M" to

"a first total term weight"

and from

"a total term weight that is less than M" to

"a second total term weight that is less than the first total term weight."

The result of the amendment is that a first electronic quantity M, which was wholly described and supported in the original specification is now being referred to as a “first total term weight” and a second electronic quantity that was wholly described and supported in the original application is now being referred to as a “second total term weight.” Referring in more conventional patent language to physical electronic quantities described and claimed in the original application does not add new matter to an application. No new elements, limitations, functionality, or subject matter have been added by changing the name of the variable M. Thus, Applicant respectfully request that the Examiner withdraw this rejection.

35 U.S.C. § 112, First Paragraph

Claims 1-20 were rejected under 35 U.S.C. §112, first paragraph as containing subject matter that was not described in the specification in a way that would enable one skilled in the art ... to make and/or use the invention. In particular, Claims 13 and 20 were rejected because they do not define the term S_i and the function $\text{sum}(W_i)$. The Applicant has examined claims 13 and 20 again, and still does not find the terms S_i and $\text{sum}(W_i)$. As pointed out in the response to a similar rejection in the first office action, the terms S_i and $\text{Sum}(W_i)$ do not appear in any claims and thus this rejection has no basis and should be withdrawn. Additionally, the terms S_i and $\text{Sum}(W_i)$ are supported in the original specification. Thus, all claims comply with the requirements of 35 U.S.C. §112 and this rejection should be withdrawn.

35 U.S.C. § 112, Second Paragraph

In paragraph 8 of the office action the Examiner rejects claims 1-20 under 35 U.S.C. § 112, second paragraph for being indefinite. In particular, in paragraph 9, the Examiner asserts that the terms “first total term weight” and “second total term weight” can not be understood. Additionally, the Examiner asserts that the linkage between the first total term weight and the second total term weight can not be understood. Applicant asserts that the terms and linkages between them are clear on their face.

Patent practitioners have long referred to items as a “first item” and a “second item”. For example, when referring to a circuit that has two similar terminals for attaching a wire, one terminal may be referred to as a “first terminal” and the other terminal may be referred to as a “second terminal.” Beyond this traditional patent usage, the claims on their faces provide more information about “first total term weight” and “second total term weight” that renders the terms clear and unambiguous. For example, claim 1 reads:

...where a document that matches a first total term weight is associated to a more relevant score bin than a document that matches a second total term weight that is less than the first total term weight.

Thus, first total term weight and second total term weight are two different total term weights that facilitate placing documents in different score bins. The relationship between them is an elementary greater than or less than mathematical relationship.

In paragraph 10 of the office action the Examiner discusses claims 2-7, and 9-12 which depend from rejected independent claims. Applicant asserts that since independent claims 1, and 8 are in condition for allowance that these dependent claims are also in allowable form.

The Present Claims Patentably Distinguish Over The Reference Of Record

35 U.S.C. § 103(a)

In paragraph 12 of the office action the Examiner rejects claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Wical (U.S. Patent No. 6,460,034). The Applicant asserts that Wical does not teach or suggest each and every claimed element and/or limitation and thus the 35 U.S.C. § 103(a) rejections should be withdrawn. It should be noted that in paragraph 13, the Examiner states that “Wical discloses an object retrieval system ... with apparatus, methods, and computer program products as claimed by applicant.” Thus, Examiner correctly understands the invention to be a computerized invention. Therefore, Examiner’s assertions in paragraph 4 that lead to the 35 U.S.C. § 101 rejections are internally inconsistent with the Examiner’s positions with respect to the 35 U.S.C. § 103(a) rejections.

Claims 1 - 6

With respect to independent claim 1, Wical does not disclose retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents as claimed in claim 1. Thus, claim 1 is not obvious in light of Wical. Additionally, Wical does not disclose associating documents to relevance score bins based on relative total matched term weights. For this additional reason, claim 1 is not obvious in light of Wical. Similarly, claims 2-6 which depend from claim 1 contain the same claimed element and thus are not obvious in light of Wical.

Claim 1 concerns a method of optimizing a response time. The elements listed in paragraph 13 of the office action are all logics that form part of an apparatus. Thus, the Examiner has not established a prima facie case for rejecting the method claimed in claim 1. For this additional reason, the rejection of independent claim 1 should be withdrawn.

Claim 2 includes determining a relevance of a document independently in relation to other candidate documents, which is not disclosed in Wical. For this additional reason claim 2 is not obvious in light of Wical. Furthermore, claim 2 is a method claim and the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a method claim.

Claim 3 includes determining a set of most relevant documents ... without determining an exact relevance score for all the candidate documents, which is not disclosed in Wical. For this additional reason claim 3 is not obvious in light of Wical. Furthermore, claim 3 is a method claim and the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a method claim.

Claim 4 depends from claim 1, and claim 1 has been shown to be not obvious in light of Wical, and thus claim 4 is similarly not obvious. Furthermore, claim 4 is a method claim and the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a method claim.

Claim 5 includes defining a total relevance score range, which is not disclosed in Wical. For this additional reason claim 5 is not obvious in light of Wical. Furthermore, claim 5 is a

method claim and the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a method claim.

Similarly, claim 6 includes dividing the total relevance score range into one or more relevance score bins having equal sizes. This is not disclosed in Wical and thus claim 6 is not obvious in light of Wical for this additional reason. Furthermore, claim 6 is a method claim and the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a method claim.

Claim 7

Claim 7 concerns a computer-readable medium having computer executable instructions for performing a method that includes, among other things, retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents. Wical does not teach this claimed element and thus claim 7 is not obvious in light of Wical. Furthermore, the Examiner only provides elements of an apparatus as a basis for the §103 rejection. Thus, the Examiner has not made out a prima facie case for rejecting a computer-readable medium claim.

Claims 8 - 12

Claim 8 discloses a retrieval logic for retrieving a set of relevant objects associated to the relevance score ranges having a greatest matched term weight without retrieving the candidate objects from other relevance score ranges. Wical does not teach this claimed element and thus claim 8 is not obvious in light of Wical. The Examiner cites to col. 8, lines 58-65 as support for the assertion that Wical discloses an object retrieval logic. However, col. 8, lines 58-65 describe a query processing module that performs case sensitive query term matching. A case sensitive query term matcher does not selectively perform object retrieval.

The Examiner cites to col. 15, lines 58-61 as support for the assertion that Wical discloses a ranking logic that performs the actions claimed in claim 8. However, col. 15, lines 58-61 concern comparing theme strengths for documents, and not selectively performing object retrieval. Similarly, the Examiner cites to col. 16, lines 39-58 as support for the assertion that

Wical discloses a ranking logic that performs the actions claimed in claim 8. However, col. 16, lines 39-58 concern ordering theme groups and selecting themes based on context. Ordering theme groups and selecting themes based on context does not disclose selectively performing object retrieval. Additionally, the Examiner cites to col. 17, lines 19-26 as support for the assertion that Wical discloses a ranking logic that performs the actions claimed in claim 8. However, col. 17, lines 19-26 concern displaying a number of stars that indicate the general relevance of a category to a search term. Displaying stars does not disclose selectively performing object retrieval. Finally, the Examiner cites to col. 23, lines 26-54 as support for the assertion that Wical discloses a ranking logic that performs the actions claimed in claim 8. However, col. 23, lines 26-54 concern relevance ranking groups. Relevance ranking groups do not disclose selectively performing object retrieval. Thus, the office action does not provide a single citation to the elements claimed in claim 8. Therefore, Applicant respectfully requests that this rejection be withdrawn.

Claim 9 depends from claim 8 and since claim 8 has been shown to be not obvious in light of Wical, neither is claim 9 obvious in light of Wical.

Claim 10 discloses a logic for defining a total relevance score range. Wical does not disclose such a logic, and thus claim 10 is not obvious in light of Wical.

Claim 11 discloses the retrieval logic including logic for retrieving only objects from the candidate objects that match a highest value of the term weights. Wical does not disclose a similar logic and thus claim 11 is not obvious in light of Wical.

Claim 12 includes the ranking logic having means for associating document relevance scores to the relevance ranges based on matched term weights. Wical does not teach, suggest, or disclose this element and thus claim 12 is not obvious in light of Wical.

Claims 13 - 19

Claim 13 concerns a method that includes the step of retrieving most relevant documents based on assignment to score bins. Wical does not disclose score bins, let alone retrieving a most relevant document based on assignment to a score bin, thus claim 13 is not obvious in light of Wical. Claim 13 is a method claim. The elements listed in paragraph 13 are all logics that

form part of an apparatus. Thus, the Examiner has not established a prima facie case for rejecting the method claimed in claim 13. For this additional reason, the rejection of independent claim 13 should be withdrawn.

Claim 14 depends from claim 13 and includes identifying the most relevant documents without having to determine a final relevance score for all the candidate documents. Wical does not disclose this element, and thus claim 14 is not obvious in light of Wical.

Claim 15 depends from claim 13 and includes the additional limitation of retrieving documents that match a highest term weight associated to a highest score bin without retrieving documents associated to other score bins. As mentioned above, Wical does not disclose score bins. Furthermore, Wical does not disclose retrieving documents that match a highest term weight without retrieving documents associated to other score bins. For these additional reasons claim 15 is not obvious in light of Wical.

Claim 16 depends from claim 13 and includes the additional limitation that documents with sufficiently different total term weights will be associated with different score bins, so that more relevant documents are stored in one set of bins while less relevant documents are stored in another set of bins. Wical does not disclose score bins, let alone partitioning relevant documents into score bins based on pre-classification scores, thus claim 16 is not obvious in light of Wical.

Claim 17 depends from claim 13. Claim 13 has been shown to be not obvious in light of Wical and thus neither is claim 17 obvious in light of Wical.

Claim 18 depends from claim 13 and contains the additional element that the associating allows the most relevant documents to be identified independently from other candidate documents. Wical does not disclose this element and thus claim 18 is not obvious in light of Wical.

Claim 19 depends from claim 13. Claim 13 is not obvious in light of Wical and thus neither is claim 19.

Claim 20

Claim 20 concerns a computer-readable medium that has computer executable instructions for performing a method that includes retrieving most relevant documents based on score bins. Wical does not disclose score bins, let alone retrieving a most relevant document based on a score bin. Thus claim 20 is not obvious in light of Wical and should be in condition for allowance.

In conclusion, Applicant asserts that all the independent claims have been shown to be non-obvious and thus are allowable. Furthermore, the claims that depend from these non-obvious claims should also be allowed. Additionally, Applicant asserts that the dependent claims include additional elements that make them patentably distinguishable over the reference of record, and for those additional reasons are likewise allowable.

Applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

MAR. 10, 2004

Date

A handwritten signature in cursive script, appearing to read "Peter Kraguljac", written over a horizontal line.

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